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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,846	12/07/2005	Helmut Bechtel	DE 020159	1258
24737	7590	05/31/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			HINES, ANNE M	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/518,846	BECHTEL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Anne M. Hines	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: In claim 1, after the words "electroluminescent layer" the letter "m" appears. This appears to be a typographical error. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 rejected under 35 U.S.C. 102(e) as being anticipated by Tyan et al.  
(US 6861800).

Regarding claims 1-3, Tyan discloses an electroluminescent device comprising a substrate (Fig. 4c, 10; Column 14, lines 9-46), and adjacent to the substrate, a laminated body composed of a first electrode (Fig. 4c, 12R; Column 14, lines 9-46), an electroluminescent layer (Fig. 4c, 14; Column 14, lines 9-46), a second electrode (Fig. 4c, 16a; Column 14, lines 9-46), and  $2n+1$  transparent dielectric layers, where  $n=2$ , which transparent dielectric layers alternately have a high refractive index of  $n>1.7$  and a low refractive index of  $n\leq 1.7$ , and a transparent dielectric layer bordering on the second electrode has a high refractive index of  $n>1.7$  (Fig. 4c, 10; Column 14, lines 9-46). Tyan further discloses wherein the high refractive index material is  $\text{TiO}_2$  and the low refractive index material is  $\text{SiO}_2$  (Fig. 4c, 10; Column 14, lines 9-46).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dodabalapur et al. (US 5674636) in view of Jordan et al. ("Efficiency Enhancement Of Microcavity Organic Light Emitting Diodes").

Regarding claims 1-3, Dodabalapur teaches an electroluminescent device comprising a substrate (Fig. 2, 20; Column 4, lines 36-46), and adjacent to the substrate, a laminated body composed of a first electrode (Fig. 2, 26; Column 4, lines 36-46), an electroluminescent layer (Fig. 2, 25; Column 4, lines 36-46), a second electrode (Fig. 2, 23; Column 4, lines 36-46), and a multilayer consisting of alternating layers of SiO<sub>2</sub> and TiO<sub>2</sub> bordering the second electrode (Fig. 2, 21; Column 4, lines 36-46; Column 3, lines 36-46) to create a microcavity structure for a top-emitting OLED (Column 4, lines 36-46). Dodabalapur fails to teach the number or order of the layers in the multilayer mirror. In the same field of endeavor of multilayer mirrors for electroluminescent devices, Jordan teaches a multilayer mirror of alternating layers of SiO<sub>2</sub> and TiO<sub>2</sub> with a five layer structure bordering an electrode in the order: TiO<sub>2</sub>, SiO<sub>2</sub>, TiO<sub>2</sub>, SiO<sub>2</sub>, TiO<sub>2</sub> in order to create a quarter-wave, dielectric-stack reflector and create a microcavity between the multilayer stack and the first electrode (Fig. 1; Page 1998, Column 1, Paragraph 2 to Column 2, Paragraph 1) that improves the light-emitting

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efficiency of the OLED (Abstract). It would have been obvious to one of ordinary skill in the art to have the multilayer stack structure of Jordan for the multilayer mirror of Dodabalapur in order to improve the efficiency of the OLED.

***Other Prior Art Cited***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne M. Hines whose telephone number is (571) 272-2285. The examiner can normally be reached on Monday through Friday from 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anne M Hines  
Patent Examiner  
Art Unit 2879

*AMH*  
*5/26/06*

*MMS 5/26/06*  
**MARICEL SANTIAGO**  
**PRIMARY EXAMINER**